

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN EXAMINATION BY THE PUBLIC SERVICE)	
COMMISSION OF THE APPLICATION OF THE)	
FUEL ADJUSTMENT CLAUSE OF BIG RIVERS)	CASE NO. 94-458
ELECTRIC CORPORATION FROM NOVEMBER)	
1, 1992 TO OCTOBER 31, 1994)	

O R D E R

. This case involves a review of the operation of the fuel adjustment clause ("FAC") of Big Rivers Electric Corporation ("Big Rivers") for the two year period ending October 31, 1994.¹ Based upon its review, the Commission finds that: (1) Big Rivers properly determined fuel costs charged to native load customers and properly allocated mandated fuel cost refunds; (2) Big Rivers improperly calculated and applied mandated prospective fuel cost disallowances; (3) the base fuel cost in Big Rivers' rates should be adjusted as proposed; and (4) Big Rivers should refund an additional \$993,129 in net unreasonable costs incurred during the review period.

¹ Commission Regulation 807 KAR 5:056, Section 1(12) provides that "[e]very two (2) years following the initial effective date of each utility's fuel adjustment clause the commission in a public hearing will review and evaluate past operations of the clause, disallow improper expenses and to the extent appropriate reestablish the fuel clause charge in accordance with subsection (2) of this section."

FUEL COST ALLOCATION

Big Rivers uses its system average fuel cost to allocate fuel costs among its native load customers and firm off-system customers. It uses incremental costs,² however, to allocate fuel costs to non-firm off-system sales.³ During the review period, Big Rivers' incremental costs for the period under review were less than its system average fuel cost. Big Rivers' native load customers thus paid a higher share of fuel costs than non-firm off-system customers.

This situation is the result of the coal supply contracts for the Wilson and Green generating plants. These high volume take-or-pay contracts require the purchase of baseload quantities of fuel

² "Incremental cost" is defined as:

The additional costs incurred from the production or delivery of an additional unit of utility service, usually the minimum capacity or production that can be added. The additional cost divided by the additional capacity or output is defined as the incremental cost.

P.U.R. Glossary For Utility Management 75 (Public Utilities Reports, Inc. 1992).

³ Non-firm off-system sales are sales of energy made using power sources that at the time of delivery are not being fully used, with such energy being used by the receiver to reduce generation of more expensive operating units, or to avoid curtailing deliveries to secondary or interruptible customers. The selling utility is under no legal or contractual obligation to make the sale for any period of time. Id. at 46.

regardless of whether the coal is used.⁴ Big Rivers therefore dispatches these plants - its most expensive plants - before dispatching its lower cost plants. Native load customers thus pay the higher baseload costs, while non-firm off-system customers are charged the lower incremental fuel costs.

Kentucky Industrial Utility Customers ("KIUC") contends that this method is contrary to normal economic dispatch procedures and is unreasonable. To remedy this situation, it proposes that Big Rivers assign its system average fuel costs to all sales. In this manner non-firm off-system customers would be treated in the same manner as native load and firm off-system customers. KIUC's proposed allocation method is similar to the methodology which Big Rivers employed during portions of the review period when it experienced problems with its new energy management system.

Nonetheless, the Commission finds no merit to KIUC's contentions. The use of incremental fuel costs for non-firm off-system sales is reasonable. Such sales are "opportunity sales" in which the "market price" established by the bulk power market is based upon a utility's marginal or incremental cost.

Given the terms of its coal supply contracts for the Wilson and Green generating plants, Big Rivers' dispatching methods are

⁴ Contract No. 527 requires Big Rivers to take 1,020,000 tons annually for the Wilson Plant. Contract No. 865 requires Big Rivers to take an additional 240,000 tons for use at the Wilson Plant. Contract No. 246 requires Big Rivers to take an annual minimum delivery of 850,000 tons for the Green Plant. Contract No. 528 requires Big Rivers to take an additional 388,800 tons annually for the Green Plant.

not unreasonable. Because of those contracts' take-or-pay provisions, the incremental cost of burning their coal is zero. Burning fuel at another plant, however, results in a higher incremental cost as Big Rivers would incur not only the cost of the take-or-pay coal but also the cost of any replacement coal. While the Commission has reviewed on several occasions Big Rivers' decisions to contract for these baseload quantities,⁵ it has not found the baseload quantities to be the result of unreasonable fuel procurement decisions.

LINE LOSS ALLOCATION TO OFF-SYSTEM SALES

At the hearing KIUC's witnesses alleged that Big Rivers is not including line losses in the fuel costs of non-firm off-system sales in violation of Commission Regulation 807 KAR 5:056. They argue that this action is unreasonable and is the principal reason that non-firm off-system customers are allocated a lower fuel cost than jurisdictional native load customers.

The record fails to support these contentions. Both KIUC witnesses concede a lack of knowledge about Big Rivers' current allocation practices on this point.⁶ Moreover, Big Rivers'

⁵ See, eg., Case No. 90-360-C, An Examination by the Public Service Commission of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 1991 to April 30, 1992 (July 21, 1994).

⁶ KIUC's witnesses either assumed that Big Rivers was not allocating line losses to off-system sales or referred to a document that purports to show what Big Rivers was doing eight years ago. KIUC presented no evidence that Big Rivers did not allocate line losses to off-system sales during the two-year review period.

responses to discovery requests support its contention that, as a general policy, it charges line losses to non-firm off-system sales. The reports of its energy management system for the review period indicate that it applied line losses to non-firm off-system sales.

ALLOCATION OF REFUNDS

KIUC argues that Big Rivers is not complying with the Commission's Order in Case No. 90-360-C⁷ which disallowed approximately \$12.4 million in Contract No. 527 fuel costs that were found unreasonable. First, it contends that these refunds should be allocated between jurisdictional and non-jurisdictional customers based upon their respective share of the Wilson unit's coal costs. Big Rivers' use of incremental costs for non-firm off-system sales, KIUC asserts, prevents this allocation. In lieu of this incremental cost methodology, KIUC proposes that the Commission require the use of an average cost methodology to ensure that jurisdictional customers receive their proper share of the disallowed costs.

KIUC also argues that Big Rivers' refund method prevents jurisdictional ratepayers from receiving the total amount due them. The supplemental sales agreements between Big Rivers and NSA, Inc. and Alcan Aluminum establish minimum price "floors" for certain energy purchases. These "floors" prevent the full FAC credit for

⁷ Case No. 90-360-C, An Examination by the Public Service Commission of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 1991 to April 30, 1992 (July 21, 1994).

disallowed fuel costs from being applied to these kilowatt-hour ("KWH") sales. As a result, Big Rivers retained approximately \$154,000 of disallowed costs during the last three months of the review period. To ensure return of the full jurisdictional amount, KIUC argues, changes in the method for calculating the FAC refund credit should be made.

The Commission finds no merit in KIUC's first argument. The Order of July 21, 1994 did not require retroactive matching of the Contract No. 527 cost disallowances with the customer groups that receive their power from the Wilson plant. To determine the jurisdictional portion of the unreasonable fuel costs, the Commission applied the ratio of jurisdictional fuel costs to total fuel costs for the review period to the total amount of unreasonable fuel costs.⁸

The Commission's allocation method is based on the proposition that refunds of unreasonable fuel costs should go to the customers assessed those costs.⁹ It is not based upon the assumption that jurisdictional and non-jurisdictional customers share proportionately in the fuel costs of the Wilson plant as alleged by

⁸ 81.9 percent x \$13.186 million = \$10.8 million.

⁹ The following factors influenced the choice of an allocation method: (1) the lack of any proposals on jurisdictional allocations; (2) the inability of Big Rivers' energy management systems to track precisely fuel costs from a particular generating plant to a particular customer group; and (3) the retrospective disallowances involved two coal contracts which supplied different generating units.

KIUC. If such an assumption were correct, then it logically follows that the same proportionate sharing applies to all generating units and that all customers are charged the system average fuel cost. Therefore, there would be no reason to affect a jurisdictional split. The allocation between jurisdictional and non-jurisdictional customers could then be based on KWH sales rather than fuel costs.

The Commission's jurisdictional split explicitly recognizes that jurisdictional customers incurred a proportionately higher share of fuel costs due to Contract No. 527. While this approach does not result in a precise matching of fuel costs by plant and customer group, it reflects the differences in jurisdictional and non-jurisdictional fuel costs resulting from a utility's fuel mix, dispatching constraints, and method of pricing non-firm off-system sales.

The record fails to support KIUC's contention that non-firm off-system sales bear no Contract No. 527 fuel costs. During most of the review period, Big Rivers used daily system average fuel costs for non-firm sales. These sales included the fuel costs of all generating units. Moreover, Big Rivers' energy management system reports indicate that during the review period, Big Rivers made several off-system sales which include fuel costs exceeding both the system average cost and the monthly average fuel cost of the Green generating plant (the second highest cost generation on the system).

KIUC's effort to change the allocation method of refunds, furthermore, is an untimely attempt to modify the Commission's Order of July 21, 1994.¹⁰ KIUC seeks retroactive changes to the allocation method prescribed in that Order. Such challenge should have been made in a petition for rehearing of the July 21, 1994 Order or in its action for review.¹¹ KRS 278.400; KRS 278.410. At issue in this proceeding is whether Big Rivers has complied with the July 21, 1994 Order during this review period. KIUC has not shown any failure by Big Rivers to comply nor any compelling reason to change or modify the allocation method.

As to KIUC's second argument, the supplemental sales agreements prevent a complete refund of the jurisdictional portion of unreasonable fuel charges. KIUC's proposal to correct this situation, however, clearly violates the filed rate doctrine as the supplemental sales agreements establish a floor on the fuel charges. Moreover, when entering these agreements, the two aluminum smelters were aware of the possibility of refunds of unreasonable fuel charges through the FAC proceedings and that the agreements limited the level of such refunds.

¹⁰ KIUC attempts to obscure this challenge to the Commission's Order by focusing on the allocation of fuel costs for the current review period, primarily the month of August 1994. While refunding commenced in August 1994, the Commission based the refund allocation on the 30-month review period ending April 30, 1993. It bears no relationship to the allocation of fuel costs for the month refunds commenced.

¹¹ Kentucky Industrial Utility Customers v. Public Service Commission, Franklin Circuit Court, Civil Action No. 94-CI-01263.

CALCULATION AND ALLOCATION OF PROSPECTIVE DISALLOWANCES

In its Order of July 21, 1994, the Commission directed that Big Rivers reduce by \$6.63 per ton the price for all coal purchased under Contract No. 527 for purposes of calculating the fuel cost for recovery through its FAC. To calculate this disallowance, Big Rivers multiplies the tons purchased under Contract No. 527 by \$6.63 to arrive at the total system disallowance. To obtain the jurisdictional portion of the disallowance, it then applies a factor derived from the percentage of jurisdictional fuel costs compared to total system fuel costs for the month in question. The jurisdictional disallowance is then deducted from the jurisdictional fuel cost at the bottom of the fuel cost schedule in its monthly FAC report.

KIUC contends that Big Rivers' method improperly implements the Commission's Order by calculating a jurisdictional component separate from the fuel cost schedule and deducting the result from the jurisdictional fuel cost as calculated on the schedule. It argues that the amount of the total system disallowance should be reflected in the total system "coal burned" amount shown at the top of the fuel cost schedule in the FAC report. The amount of the disallowance which shows up in the jurisdictional fuel cost would then be determined by the dispatch of the system and the resulting level of fuel costs charged to off-system sale.

Big Rivers' method is not unreasonable, but other methods exist which more accurately track prospective fuel costs. While KIUC's proposal represents a move in that direction, it ignores the

requirement that "all fuel costs shall be based on weighted average inventory costing." 807 KAR 5:056, Section 1(3)(e). KIUC's proposal improperly takes the monthly tonnage purchased directly to the fuel cost schedule. The Commission finds that the more appropriate and reasonable approach is to add the monthly tonnage purchased, priced to reflect the appropriate per ton disallowance,¹² to the coal inventory for the Wilson plant, with the resulting weighted average coal cost being reflected in the cost of coal burned at that plant.¹³ The impact of this change on Big Rivers' monthly FAC reports for the final three months of the review period is shown in Appendix A. The Commission finds that, beginning with its monthly FAC report for February 1996, Big Rivers should reflect the prospective disallowance in this manner.

To implement this approach, it will be necessary to recalculate Big Rivers' coal inventory balances for the 15-month period from November 1994 through January 1996 to reflect the adjusted beginning inventory balance for the month of February 1996. Using Big Rivers' monthly FAC reports and FAC back-up reports, the Commission has made the calculations through December

¹² The per ton disallowance should reflect the latest revision to the productivity index applicable to Contract No. 527.

¹³ The Commission envisioned this approach when it stated in its July 21, 1994 Order that "the price for all coal purchased from GRCC shall be reduced in the manner set forth in Appendix C to reflect the current impact of the disallowances for both the amendment and Substitution Agreement beginning in August 1994". Order at 36. Given the FAC regulation's requirement to use weighted average inventory costing, no other method is acceptable.

1995 and has arrived at \$5,880,333, as the ending inventory balance for December 1995 which in turn becomes the beginning balance for January 1996.

CURRENT PERIOD DISALLOWANCE

In Case No. 90-360-C, the Commission determined that Big Rivers incurred unreasonable costs for coal purchased under Contract 527 for the period from November 1, 1990 to April 30, 1993 and ordered their refund.¹⁴ The Commission further ordered Big Rivers to adjust its fuel cost for all coal purchased under Contract No. 527 after July 31, 1994. In Cases No. 92-490-B¹⁵ and 92-490-C,¹⁶ the Commission addressed the unreasonable fuel costs incurred from May 1, 1993 through April 30, 1994. It left the question of fuel costs for the period from May 1, 1994 through July 31, 1994 for this review.

During the three months in question Big Rivers purchased 273,482 tons of coal under Contract No. 527. Based on the methodology established in Case No. 90-360-C, the Commission finds that Big Rivers incurred \$618,069 in unreasonable costs during

¹⁴ Order of July 21, 1994 at 12-17.

¹⁵ Case No. 92-490-B, An Examination by the Public Service Commission of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from May 1, 1993 to October 31, 1993.

¹⁶ Case No. 92-490-C, An Examination by the Public Service Commission of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 1993 to April 30, 1994.

these three months as a result of Amendment No. 1¹⁷ and \$1,214,260 in unreasonable costs as a result of the Substitution Agreement,¹⁸ for a total of \$1,832,329. The jurisdictional portion of the total is calculated using the ratio of jurisdictional fuel costs to total fuel costs. For the three months in question Big Rivers reported jurisdictional fuel costs of \$25,527,517 and total fuel costs of \$35,872,716.¹⁹ The ratio is 71.2 percent resulting in \$1,304,618 in unreasonable costs allocated to jurisdictional sales.

Pursuant to 807 KAR 5:056, the Commission may require a utility to charge off and amortize unreasonable costs by means of a temporary decrease in rates. To ensure the return of the unreasonable costs over a period of time commensurate with the period during which the costs were incurred, the Commission finds that Big Rivers should charge off and amortize the unreasonable costs of \$1,304,618, with interest,²⁰ over a period of three months

¹⁷ 273,482 tons x \$2.26 per ton = \$618,069. The difference of \$2.26 per ton was established in Case No. 92-490-C. See Appendix A to the Commission's Order dated November 1, 1994. This amount reflects the impact of the revised productivity index of 3.05 applicable to Contract No. 527 for calendar year 1994.

¹⁸ 273,482 tons x \$4.44 per ton = \$1,214,260. See Appendix A to the Commission's November 1, 1994 in Case No. 92-490-C for the calculation of the \$4.44 per ton.

¹⁹ This amount is based upon Big Rivers' monthly FAC reports.

²⁰ Interest should be based on the average of the Three-Month Commercial Paper Rate as reported in the Federal Reserve Bulletin and the Federal Reserve Statistical Release for the period May 1, 1994 to July 31, 1994. In all other respects the calculation of interest should follow the method prescribed in the July 21, 1994 Order.

beginning with its FAC filing for the month of February 1996.²¹ After combining this amount with the reduced fuel costs attributable to the change in calculating prospective disallowances, the Commission finds that Big Rivers should return \$993,129 to its jurisdictional customers.

AMOUNT OF FUEL COSTS IN BASE RATES

Big Rivers has proposed to reduce the fuel cost component in its base rates for service provided at non-smelter delivery points from 12.9 mills to 12.62 mills per KWH.²² It proposed that the month of September 1994 be used as the base period in arriving at the base fuel cost and the KWH components of its FAC.

After review of the supporting data for this proposal, the Commission finds that September 1994 is a representative generation month. Based on the record, Big Rivers' proposed base fuel cost of 12.62 mills per KWH for non-smelter delivery points should be effective for service rendered on and after April 1, 1996, to be reflected in bills rendered on and after May 1, 1996. The rates and charges in Appendix B are designed to reflect the transfer (roll-in) to base rates of the differential between the old base

²¹ This amount should be offset with the \$311,489 in increased fuel costs which results from changing the method used to recognize the prospective disallowances ordered by the Commission in Case No. 90-360-C.

²² The base fuel cost included in rates for service provided at smelter delivery points was set at 12.95 mills per KWH in the settlement of Case No. 89-376, to remain at that level until September 1, 1997.

cost of 12.9 mills and the new base fuel cost of 12.62 mills per KWH.

SUMMARY

After reviewing the evidence of record and being otherwise sufficiently advised, the Commission HEREBY ORDERS that:

1. Beginning with the month of February 1996 and continuing each month thereafter for the next two months, Big Rivers shall credit \$331,043 plus interest to the jurisdictional fuel cost included in its FAC report as filed with the Commission.

2. Beginning with the month of February 1996, Big Rivers shall, for FAC reporting purposes, reflect the prospective disallowance stemming from Amendment No. 1 and the "Andalex Substitution Agreement" to Contract No. 527 by deducting the per ton disallowance from the cost of the coal purchased prior to the purchases being added to the coal inventory for the Wilson plant.

3. The base fuel cost included in rates for Big Rivers' non-smelter delivery points shall be reduced to 12.62 mills per KWH effective for service rendered on and after April 1, 1996.

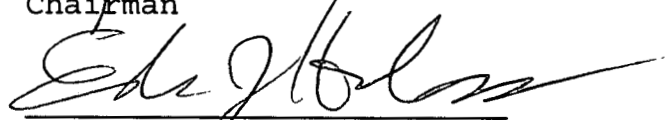
4. The rates and charges in Appendix A are fair, just, and reasonable and are approved for service rendered on and after April 1, 1996.

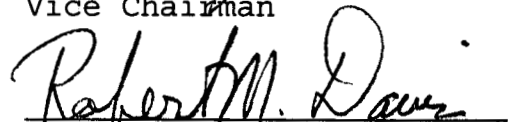
5. Within 20 days of the date of this Order, Big Rivers shall file with this Commission revised tariffs setting out the rates approved herein.

Done at Frankfort, Kentucky, this 5th day of March, 1996.

PUBLIC SERVICE COMMISSION


Chairman


Vice Chairman


Commissioner

ATTEST:


Executive Director

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 94-458 DATED MARCH 5, 1996.

IMPACT OF IMPLEMENTING THE PROSPECTIVE DISALLOWANCE ORDERED FOR COAL PURCHASED UNDER CONTRACT 527 BY ADJUSTING THE COST OF PURCHASES MADE UNDER CONTRACT 527 AND REFLECTING THE ADJUSTMENTS MONTHLY IN THE WILSON INVENTORY

AUGUST 1994 - Total Amount of Prospective Disallowance per Big Rivers' FAC Report = \$609,390
Jurisdictional Component = \$428,401

Wilson Inventory -- August 1994 -- Per Big Rivers' Back-up Report

	<u>TONS</u>	<u>AMOUNT</u>	<u>PER TON</u>
Beginning Inventory	226,940	7,959,672	\$35.0740
Purchases (As Recorded)	110,459	3,875,496	35.0853
Sub-total (As Recorded)	337,399	11,835,168	35.0777
Less: Amount Burned	123,499	4,332,060	35.0777
Ending Inventory	213,900	7,503,108	35.0777

Contract 527 Disallowance Per Weighted Average Inventory Method

	<u>TONS</u>	<u>AMOUNT</u>	<u>PER TON</u>
Beginning Inventory	226,940	7,959,672	\$35.0740
Purchases (Adj)	110,459	3,266,106 ¹	29.5685
Sub-total (Adj)	337,399	11,225,778	33.2715
Amount Burned (Adj)	123,499	4,109,003	33.2715
Ending Inventory (Adj)	213,900	7,116,775	33.2715

Impact on FAC Calculation (dollars)

Amount Burned as Reported by BREC	4,332,060
Less: Adjusted Amount Burned	<u>4,109,003</u>
Change in the Amount Burned	(223,057)
Less: Jurisdictional Disallowance Reported by BREC	<u>(428,401)</u>
Increase (Decrease) in Fuel Cost	205,344

¹ Reflects total August disallowance of \$609,390.

SEPTEMBER 1994 - Total Amount of Prospective Disallowance Per Big Rivers' FAC Report = \$613,103
Jurisdictional Component = \$433,464

Wilson Inventory - September 1994 - Per Big Rivers' Back-up Report

	<u>TONS</u>	<u>AMOUNT</u>	<u>PER TON</u>
Beginning Inventory	213,900	7,503,108	\$35.0777
Purchases (As Recorded)	110,804	3,883,426	35.0478
Sub-total (As Recorded)	324,704	11,386,534	35.0675
Less: Amount Burned	116,623	4,089,667	35.0675
Ending Inventory	208,081	7,296,867	35.0675

Contract 527 Disallowance Per Weighted Average Inventory Method

	<u>TONS</u>	<u>AMOUNT</u>	<u>PER TON</u>
Beginning Inventory	213,900	7,116,775 ²	\$33.2715
Purchases (Adj)	110,804	3,270,323 ³	29.5145
Sub-total (Adj)	324,704	10,387,098	31.9895
Amount Burned (Adj)	116,623	3,730,701	31.9895
Ending Inventory (Adj)	208,081	6,656,397	31.9895

Impact on FAC Calculation (dollars)

Amount Burned as Reported by BREC	4,089,667
Less: Adjusted Amount Burned	<u>3,730,701</u>
Change in the Amount Burned	(358,966)
Less: Jurisdictional Disallowance Reported by BREC	<u>(433,464)</u>
Increase (Decrease) in Fuel Cost	74,498

² Reflects the impact of the inventory adjustment for August 1994.

³ Reflects total September disallowance of \$613,103.

OCTOBER 1994 - Total Amount of Prospective Disallowance Per Big Rivers' FAC Report = \$642,090
Jurisdictional Component = \$493,767

Wilson Inventory - October 1994 - Per Big Rivers' Back-up Report

	<u>TONS</u>	<u>AMOUNT</u>	<u>PER TON</u>
Beginning Inventory	208,081	\$7,296,867	\$35.0675
Purchases (As Recorded)	115,002	4,039,202	35.1227
Sub-total (As Recorded)	323,083	11,336,069	35.0872
Less: Amount Burned	116,409	4,084,469	35.0872
Ending Inventory	206,674	7,251,600	35.0872

Contract 527 Disallowance Per Weighted Average Inventory Method

	<u>TONS</u>	<u>AMOUNT</u>	<u>PER TON</u>
Beginning Inventory	208,081	\$6,656,397 ⁴	\$31.9895
Purchases (Adj)	115,002	3,397,112 ⁵	29.5396
Sub-total (Adj)	323,083	10,053,509	31.1174
Amount Burned (Adj)	116,409	3,622,349	31.1174
Ending Inventory (Adj)	206,674	6,431,160	31.1174

Impact on FAC Calculation (dollars)

Amount Burned as Reported by BREC	4,084,469
Less: Adjusted Amount Burned	<u>3,622,349</u>
Change in the Amount Burned	(462,120)
Less: Jurisdictional Disallowance Reported by BREC	<u>(493,767)</u>
Increase (Decrease) in Fuel Cost	31,647

⁴ Reflects the impact of the inventory adjustments for August and September 1994.

⁵ Reflects the total October disallowance of \$642,090.

APPENDIX B

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 94-458 DATED MARCH 5, 1996.

The following rates and charges are prescribed for Big Rivers Electric Corporation. All other rates and charges not specifically mentioned herein shall remain the same as those in effect under the authority of this Commission prior to the effective date of this Order.

RATES

For all non-smelter delivery points:

- (2) An Energy Charge of:

All KWH per month at \$.0178206